

WHAT IS CLAIMED IS:

1. An image reading apparatus comprising:

an image reading unit having a photoelectric conversion component for reading light from an image and converting the read image to an image signal;

a driving motor for moving said image reading unit and the image relative to each other;

a motor control unit for controlling said driving motor;

an interface connecting to an external information processing device;

a conversion circuit for performing analog-to-digital conversion on the image signal into image data;

a memory connected to said interface for storing the image data; and

a control signal receiving unit for receiving a motor control signal via said interface,

wherein said control signal receiving unit receives the motor control signal which controls said driving motor so as to satisfy the relationship $V1 \leq V2$, where $V1$ represents a data speed at which the image is read to generate the image data, and $V2$ represents a data speed at which the image signal read out via said interface is stored in the information processing device as one piece of image data,

and

wherein said motor control unit controls said driving motor according to the received motor control signal.

2. The image reading apparatus of claim 1, wherein said control signal receiving unit further receives the motor control signal which controls said driving motor so as to satisfy the relationship $V1 \leq V3$, where $V3$ represents a data speed at which the image data is read out from said memory via said interface, and

wherein said motor control unit controls said driving motor according to the received motor control signal.

3. An image reading system comprising:

(A) an image reading apparatus comprising:

(i) an image reading unit having an photoelectric conversion component for reading light from an image and converting the read image to an image signal;

(ii) a driving motor for moving said image reading unit and the image relative to each other;

(iii) a motor control unit for controlling said driving motor;

(iv) a conversion circuit for performing analog-to-digital conversion on the image signal into image data; and

(v) an image memory for storing the image data; and

(B) an information processing apparatus comprising:

(i) a temporary storage memory for reading and temporarily storing the image data stored in said image memory;

(ii) a first timer for measuring the speed of the data stored in said temporary storage memory; and

(iii) a control signal generating unit for outputting a motor control signal to said motor control unit based on the measurement of said first timer,

wherein said motor control unit controls said driving motor according to the motor control signal output by said control signal generating unit.

4. The image reading system of claim 3, wherein, based on the measurement of said first timer, said control signal generating unit outputs the motor control signal which controls said driving motor so as to satisfy the relationship $V1 \leq V2$, where $V1$ represents a data speed at which the image is read to generate the image data, and $V2$ represents a data speed at which the image data is stored in said temporary storage memory, and

wherein said motor control unit controls said driving motor according to the motor control signal.

5. The image reading system of claim 3 or 4, further

comprising:

an interface for connecting said image reading apparatus to said information processing apparatus; and
a second timer for measuring the speed of the data read out from said image memory via said interface,
wherein said control signal generating unit outputs the motor control signal to said motor control unit based on the measurements of said first and second timers.

6. The image reading system of claim 5, wherein said control signal generating unit outputs the motor control signal which controls said driving motor so as to satisfy the relationship $V1 \leq V3$, where $V3$ represents a data speed at which the image data is read out from said image memory via said interface based on the measurement of said second timer.

7. The image reading system of claim 3 or 4, wherein said temporary storage memory has a second temporary storage memory as a virtual memory, and

wherein said first timer measures the speed of the data stored in said second temporary storage memory.

8. The image reading system of claim 3 or 4, wherein said information processing apparatus further comprises an

image processing unit for performing image processing on the image data read from said image memory, and wherein said temporary storage memory stores the image data on which the image processing is performed by said image processing unit.

9. The image reading system of claim 8, wherein said first timer measures an image processing speed of said image processing unit.

10. A controlling method for controlling an image reading system, comprising the steps of:

reading image data at a predetermined read speed to generate image data;

storing the image data in storage means;

reading out the image data stored in the storage means via an interface;

temporarily storing the image data, which is read out in the reading out step, in a temporary storage memory; and

detecting a speed at which the temporary storage memory temporarily stores the image data,

wherein the read speed in the reading step is controlled according to the speed detected in the detecting step.

11. The method of claim 10, further comprising

controlling the read speed of the image data to be lower if the speed detected in the detecting step is lower than a predetermined value.

12. The method of claim 11, wherein the predetermined value is higher than a transmission rate of the interface.

13. The method of claim 10, wherein the detecting step includes detecting a speed at which the image data is stored in a virtual memory as the temporary storage memory.

14. The method of claim 13, wherein the detecting step includes detecting at least one of a write speed to and a read speed from the virtual memory.

15. The method of claim 10, further comprising the step of performing image processing on the image data read out in the reading out step, wherein the image data on which the image processing is performed in the image processing step is stored in the temporary storage memory.

16. The method of claim 15, wherein the detecting step includes detecting an image processing speed in the image processing step.

17. A recording medium having a computer-executable program recorded therein, the program implementing a method according to any one of claims 10 to 16 in an image reading system comprising an image reading apparatus and a computer.

18. A method of controlling an image reading, comprising the steps of:

reading an image and generating image data;
transmitting the generated image data;
processing the transmitted image data; and
measuring a processing speed of the image data in the processing step,

wherein the reading of the image is controlled so that a speed at which the image data is generated in the image data generating step is lower than the processing speed measured in the measuring step.

19. The method of claim 18, further comprising the step of measuring a transmission speed of the image data in the transmitting step,

wherein the reading of the image is controlled so that a speed at which the image data is generated in the image data generating step is lower than any of the transmission speed and the processing speed measured in the each measuring step.

20. A recording medium having a computer-executable program recorded therein, the program implementing a method according to claim 18 or 19 in an image reading system comprising an image reading apparatus and a computer.